# This Page Is Inserted by IFW Operations and is not a part of the Official Record

### **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

#### IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

# FIG. 1A

5'	GAC	GCG	11 TGG	GCG	CGG	20 AGG	CGC	TGG	29 GCG		GGC	38 GCG	GAG	CCG	47 GCC	GGA	GCT	56 CGA
	D	Α	w	 А	 R	 R	R	w	 A	н	G	Α	 E	 P	 A	 G	 A	R
	GGC	CGG	65 CGG	CGG	CGG	74 GAG	AGC	GAC	83 CCG	GGC	GGC	92 CTC	GTA	GCG	101 GGG	CCC	CGG	110 ATC
	G	R	R	R	R	E	s	D	P	G	G	L	v	A	G	P	R	I
	ccc	GAG	119 TGG	CGG	CCG	128 GAG	CCT	CGA	137 AAA	GAG		146 CTC	AGC	GCT	155 GAT		GAG	164 ATG
	P	E	W	R	P	E	P	R	K	Е	I	L	s	A	D	F	E	М
	ATG	<b>G</b> GC	173 TTG	GGA	AAC 	182 GGG	CGT	CGC	191 AGC	ATG	AAG	200 TCG	CCG	CCC	209 CTC	GTG	CTG	218 GCC
	М	G	L	G	N	G	R	R	S	M	К	s	P	P	L	V	L	A
	GCC	CTG	227 GTG	GCC	TGC	236 ATC			245 TTG			254 AAC		TGG	263 ATT	GCG	AGC	272 TCC
	A	L	V	Α	C	I	I	. A	L	G	F	N	Y	W	I	A	s	s
	CGG	AGC	281 GTG	GAC	CTC	290 CAG	ACA		299 ATC	ATG		308 CTG	GAA	GGC	317 AGG	GTC	CGC	326 AGG
	R	s	v	D	L	Q	T	R	I	M	E	L	Е	G	·R	v	R	R
	GCG	GCT	335 GCA	GAG	AGA	344 GGC	GCC	GTG	353 GAG	CTG	AAG	362 AAG	AAC	GAG	371 TTC	CAG	GGA	380 GAG
	A	A	A	E	R	G	A	V	E	L	K	K	N	E	F	Q	G	E
	CTG	GAG	389 AAG	CAG	CGG	398 GAG	CAG	CTT	407 GAC	AAA	ATC	416 CAG	TCC	AGC	425 CAC	AAC	TTC	434 CAG
	L	E	K	Q	R	E	Q	L	D	K	I	Q	s	s	Н	N	F	Q
	CTG	GAG	443 AGC	GTC	AAC	452 AAG	CTG		461 CAG		GAA	470 AAG	GCG		479 TTG	GTG	AAT	488 AAC
	L	E	S	V	N	K	L	Y	Q	D	E	K	A	V	L	v	N	N
	ATC	ACC	497 ACA	GGT	GAG	506 AGG	CTC	ATC	515 CGA	GTG	CTG			CAG		AAG		542 CTG
	I	Т	T	G	E	R	L	I	R	V	L	Q	D	Q	L	К	T	L
	CAG	AGG	551 AAT	TAC	GGC	560 AGG	CTG		569 CAG		GTC		CAG			AAG		596 CAG
	Q	R	N	Y	G	R	L	Q	Q	D	v	L	Q	F	Q	ĸ	N	Q
					AGG	AAG		TCC					CAG	TGC	ATC		CAG	
					 R													

## FIG. 1B

AAG	GAG	659 GTG	AAG	GAA	668 CAG	TGT	GAG	677 GAG		ATA	686 GAA		GTC	695 ACC	AAA	AAG	704 GGG
К	E	v	ĸ	E	Q	C	E	E	R	I	E	E	v	T	ĸ	ĸ	G
AAT	GAA	713 GCT	GTA	GCT	722 TCC	AGA	GAC	731 CTG	AGT	GAA	740 AAC	AAC	GAC	749 CAG	AGA	CAG	758 CAG
N	E	A	v	Α	s	R	D	L	s	E	N	N	D	Q	R	Q	Q
CTC	CAA	767 GCC	CTC	AGT	776 GAG	CCT	CAG	785 CCC	AGG		794 CAG		GCA		CTG	CCA	812 CAC
L	Q	A	L	s	E	P	Q	P	R	, <b>L</b>	Q	A	A	G	L	P	Н
ACA	GAG	821 GTG	CCA	CAA	830 GGG	AAG	GGA	839 AAC	GTG	CTT	848 GGT		AGC	857 AAG	TCC	CAG	866 ACA
T	E	V	P	Q	G	K	G	N	v	L	G	N	s	К	s	Q	T
CCA	GCC	875 CCC	AGT	TCC	884 GAA	GTG	GTT	893 TTG		TCA	902 AAG	AGA	CAA	911 GTT	GAG	AAA	920 GAG
P	Α	P	s	s.	E	v	v	L	D	s	K	R	Q	v	E	К	E
GAA	ACC	929 AAT	GAG	ATC	938 CAG	GTG	GTG	947 AAT		GAG		CAG		965 GAC	AGG	CTG	974 CCG
E	T	N	E	I	Q	v	v	N	E	E	P	Q	R	D	R	L	P
		983			000		_			_			_				
CAG	GAG			CGG	992 GAG	CAG	-	GTG	GAA					GGT		-	GGC
CAG  Q	GAG  E			CGG		CAG	GTG			GAC						AGA	
Q	E	CCA P	GGC  G	CGG  R	GAG	CAG  Q	GTG V	GTG  V 1055	GAA  E	GAC  D	AGA R R L064 CAG	CCT P	GTA  V	GGT  G L073	GGA  G	AGA R	GGC  G 
Q	E	CCA P	GGC  G	CGG R	GAG E E	CAG  Q	GTG V	GTG  V 1055	GAA  E	GAC  D	AGA R R	CCT P	GTA  V	GGT  G L073	GGA  G	AGA R CTG	GGC  G 
Q TTC	E GGG G G	CCA P 1037 GGA G 1091	GGC G GCC  A	CGG R R GGA  G	GAG E L046 GAA  E	CAG Q CTG	GTG V	GTG V 1055 CAG  Q	GAA E ACC T	GAC D CCA P	AGA R 1064 CAG Q	CCT P GTG V	GTA V CAG Q	GGT G 1073 GCT  A	GGA G G GCC	AGA R CTG	GGC  G .082 TCA  S
Q TTC F	E GGG G G	CCA P 1037 GGA G 1091	GGC G GCC  A	CGG R R GGA  G	GAG E 1046 GAA E 1100 CCA	CAG Q CTG	GTG V V GGC G G	GTG V 1055 CAG  Q	GAA E ACC T	GAC D CCA P	AGA R 1064 CAG Q	CCT P GTG V	GTA V CAG Q	GGT G 1073 GCT  A	GGA G G GCC	AGA R CTG	GGC  G .082 TCA  S
Q TTC F	GGG G AGC S	CCA P 1037 GGA G 1091 CAG Q 1145 GGA	GGC GCC  A GAA  E	CGG R GGA G AAT N GAG	GAG E L046 GAA E L100 CCA P	CAG Q CTG L GAG GAG	GTG V  GGC G ATG M  CAG	V LOSS CAG Q LOSS GAG E LOSS GAA	GAA E ACC T GGC GGC GGCT	GAC D CCA P CCT P	AGA R L064 CAG Q L118 GAG E	CCT P GTG V CGA R GAA	GTA V CAG Q GAC D GGG	GGT G GCT A 127 CAG Q 181 AGA	GGA GCC A CTT L AAC	AGA R CTG L GTC V CAG	GGC  G .082 TCA  S .136 ATC  I
Q TTC F	GGG G AGC	CCA P 1037 GGA G 1091 CAG Q 1145 GGA	GGC GCC A GAA  E	CGG R GGA G AAT N GAG	GAG  E 1046 GAA  E 1100 CCA  P	CAG Q CTG L GAG GAG GAG	GTG V I GGC G ATG M CAG	V LOSS CAG Q GAG E LI63 GAA	GAA E ACC T GGC G GCT	GAC D CCA P CCT P	R LO64 CAG Q L118 GAG E L172 GGG	CCT P GTG V CGA R	GTA V CAG Q GAC D GGG	GGT G 1073 GCT A 1127 CAG Q 1181 AGA	GGA GCC A CTT L AAC	AGA R CTG L GTC V CAG	GGC 
Q TTC F GTG V CCC	GGG G AGC S GAC	CCA P 1037 GGA G 1091 CAG Q 1145 GGA G	GGC G GCC A GAA  E CAG	CGG R GGA G AAT N GAG E	GAG E L046 GAA E L100 CCA P L154 GAG E	CAG Q CTG L GAG E	GTG V  GGC G ATG M  CAG O	GTG V V 1055 CAG Q 1109 GAG E 1163 GAA E 217	GAA E ACC T GGC G GCT A	GAC D CCA P CCT P GCC A	AGA R 1064 CAG Q 1118 GAG E 1172 GGG G	CCT P GTG V CGA R GAA E	GTA V CAG Q GAC D GGG G	GGT G GCT A 127 CAG  Q 181 AGA  R	GGA GCC A CTT L AAC N	AGA R CTG L GTC V CAG	GGC 
Q TTC F GTG V CCC P	GGG GAC CTG	CCA P 1037 GGA G 145 GGA G 1199 AGA	GGC GCC A GAA  E CAG  Q	CGG R GGA GGA AAT N GAG E GAA	GAG E 1046 GAA E 1100 CCA P 1154 GAG E	CAG Q CTG L GAG E GAG E	GTG V  GGC G ATG M  CAG O TAC	GTG V V	GAA E ACC T GGC G GCT A ATG	GAC D CCA P CCT P GCC A GAT	AGA R L064 CAG Q L118 GAG E L172 GGG G L226 GAA	CCT P GTG V CGA R GAA E	GTA V CAG Q GAC D GGG G GAA	GGT G G 1073 GCT  A 1127 CAG  Q 1181 AGA  R	GGA GCC A CTT L AAC N GAA	AGA R CTG L GTC V CAG O	GGC 
Q TTC F GTG V CCC P AAA	GGG GGG AGC S GAC D CTG	CCA P 1037 GGA G 1091 CAG Q 1145 GGA R 1253	GGC GCC A GAA CAG GGA GGA GGA CAA	CGG R GGA GGA N GAG E GAA E	GAG E L046 GAA E L100 CCA P L154 GAG E	CAG Q CTG L GAG E GAC D CTG	GTG V  GGC G ATG ATG ATG TAC Y	GTG V V	GAA E ACC T GGC G GCT A ATG M AAT	GAC D CCA P CCT P GCC A GAT GAT	AGA R 1064 CAG Q 1118 GAG E 1226 GAA E	CCT P GTG V CGA R GAA R AAT N	GTA V CAG O GAC O GGG G GAA C E ATA	GGT G 1073 GCT A 1127 CAG Q 1181 AGA R 1235 GCA A 1289 GAT	GGA GCC A CTT L AAC N GAA E	AGA R CTG CTG V CAG O TCT S	GGC G S 136 ATC I 190 CAG Q 244 GAG E 298

### FIG. 1C

		L307												1343			1352
		GAT															
		D															
		1361			1370												
AAT	CAT	ACA	CTC	TGA	ATT	GAA	CTG	GAA	TCA	CAT	ATT	TCA	CAA	CAG	GGC	CGA	AGA
 N		 T															
14																	
CAT		1415	***	3 mg	1424	3.000	200	L433	ma.	7077	442		3.00	1451			L460
		TAT															
																	1514
AAA	TAA	AAT	GTA	CAT													
CIM's		1523												1559			
GIA	GGA	AAA	AAT	GGA	ATG	GTC	TTT	TAA	ACA	GCT	TTT	GGG	GGG	TAC	TTT	GGA	AGT
																	1622
GTC	TAA	TAA	GGT	GTC													
		1631	-														1676
		CTG															
		1685															1730
TTC	TGG	AAT															
		1739															1784
		AGG															
		1793			1802	- <del></del>		181			1820	`		1920			1838
CCA	AGT	GCT															
														<b></b> -			
		1847															1892
		GTA															
																	1946
TGA	CTG	TTA															
										- <b></b>							
		1955															2000
		TGT															
		2009												2045			2054
TCA	TTT			TAC													TGG
		2063			2072									2099			2108
		TTT															
		2117															2162
ATT	ACC	AAG															
																	2216
		GCT															
		2225															
ጥጥጥ	GTT	GTG		AGA													2270 AAG
			)														2324
TTC	ATT	GAT															

# FIG. 1D

	2333		2342			2351			2	2360		2	2369	2378			
ACA	GGA	ATA	CAA	TGG	TTG	TTT	TTA	TCA	TAG	TGT	ACA	CAT	TTA	GCT	TGT	GGT	AAA
TCA	כיזיכי	238. ACA	/ 	CTG	ATT	מידים בידים	222	2405	ን አርጥ	ממיד	2414 TCT	ፈአአ ረአአ	աատ	2423	3 777	תיים	2432
		2441			2450												2486
					CAA												
					2504												
TAG	TAT				TAA												
												5 .		2589	5		2594
					CCC												
		2603			2613												2648
AGG	ATT				AAG												
			2666														
					GCC								CTG				
				2720													
CCC	TGG				GAC												
አአር	CNC				GCA												2810
					GCA												
		2819	9		2828	3		283	7		2846	5		285	5		2864
					TCA												
					2001												2918
AGA	TAA				GTA												
			-														2972
					GGT												
			 I		2001												3026
CTA	TTC				TTA												
		3039	_		3044				_								
					AAA												

FIG. 2A

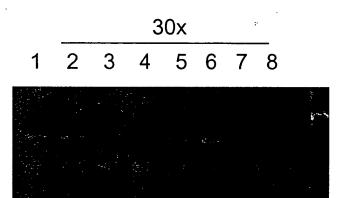
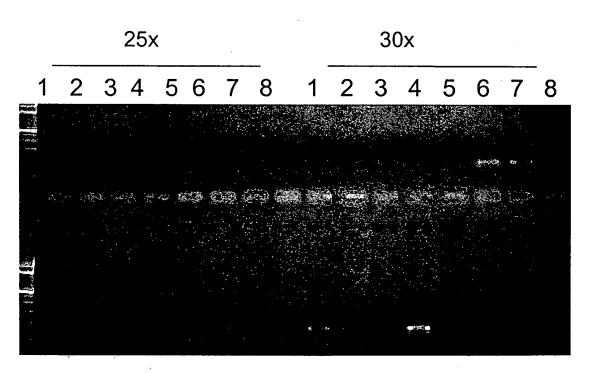


FIG. 2B



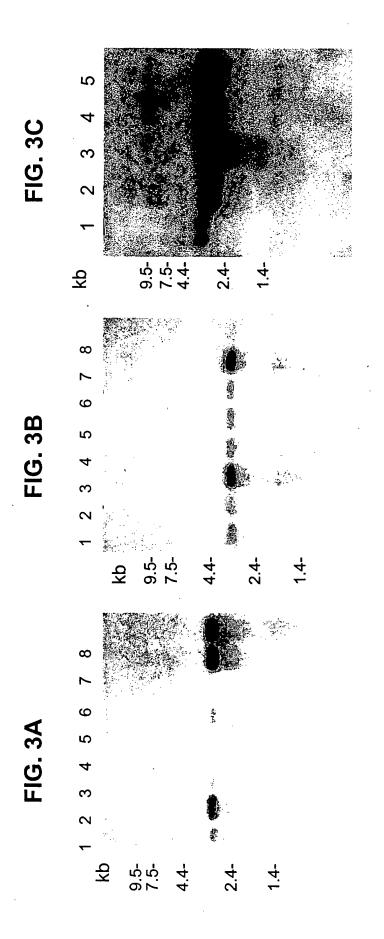


FIG. 4A

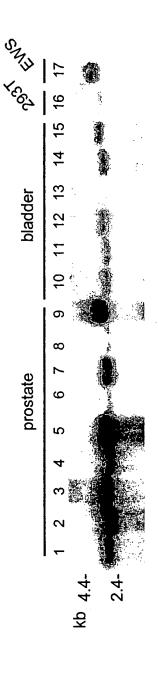
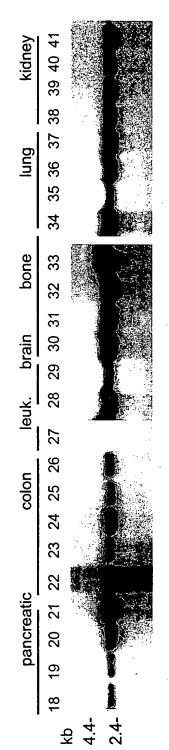
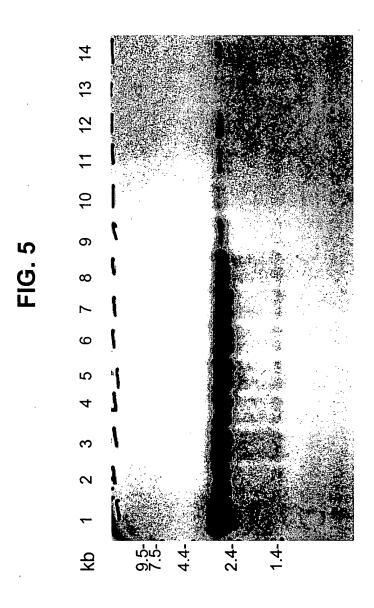


FIG. 4B





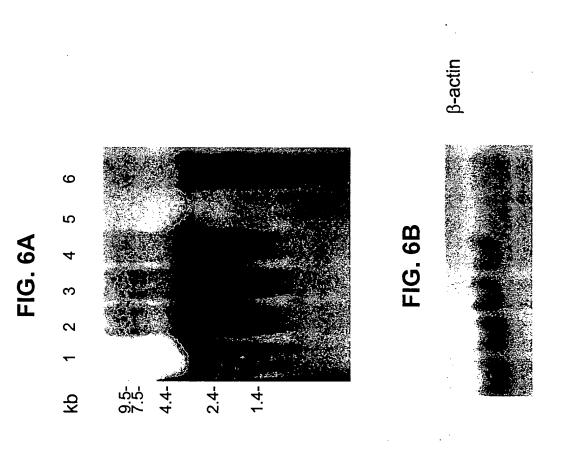
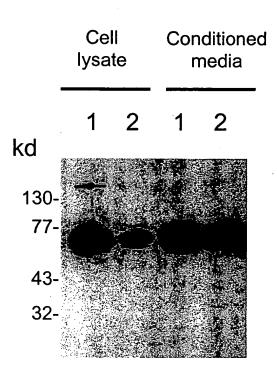


FIG. 7



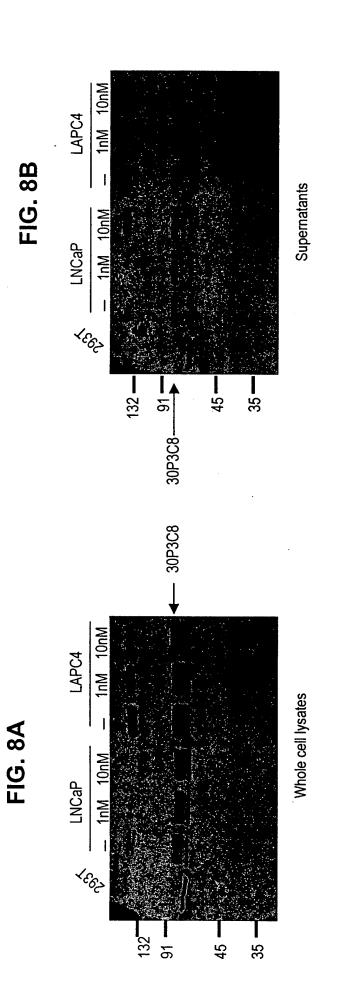


FIG. 9

